SOV/120-59-1-5/50

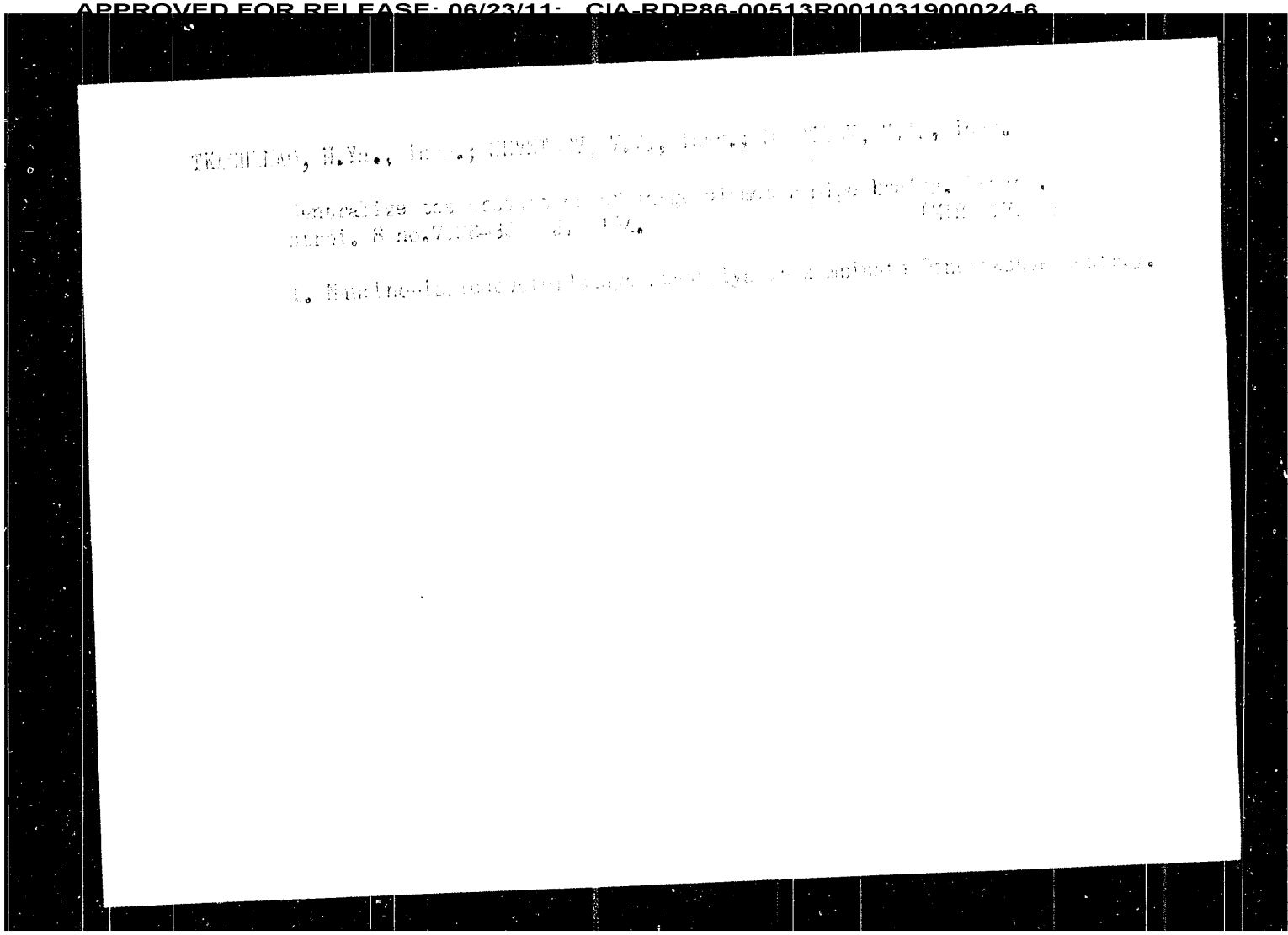
AUTHOR: Mal'tsev, V. M.

TITLE: Calculation of the Efficiency of a Lead Converter (Raschet effektivnosti svintsovogo konvertera)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Vol 6, Nr 6, pp 28-32 (USSR)

ABSTRACT: The problem is formulated as follows. A beam of γ-quanta whose energy is E_o is incident on a lead converter in the form of a disc of radius R and thickness d . The present paper is concerned with a calculation of the ratio of the number of the γ-quanta which produce charged particles which are emitted at $z = d$ to the total number of γ-quanta incident at $z = 0$. The above problem is solved under the following conditions: a) The thickness of the converter is comparable with the radiation length; b) the radius of the converter is much larger than its thickness; c) the incident energy of the γ-quanta is much greater than the critical energy so that only one dimensional treatment is required. Bremsstrahlung and pair formation are taken into account while ionisation losses and Compton effect are neglected. The range of energies considered is 50-500 MeV and the range of thickness is 0.1-0.7 cm. Two stages of the cascade process are considered. It is shown that at $E_o = 50$ Mev the

Card 1/2



TKACHENKO, N.Ya., inzh.; SHVARTSOV, V.T., inzh.; MAL'TS.V, V.I., inzh.

Rapid assembly of multirope hoisting machinery in the Donets basin. Mekhan. stroi. 21 no.6:27-29 Je '64. (MIRA 17:10)

1. Mashinno-[illegible] Rovenskaya stantsiya No. 15 kombinata Donetskshakhtostroy.

MAL'TSEV, V.L.

Multispindle drilling head with floating cranks of spindle drives. Stan. i instr. 34 no.6:36 Je '63. (MIRA 16:7)

(Drilling and boring machinery)

MAL'TSEV, V.I.; PETROV, A.A.

Course of interaction of some metalloorganic alkali [illegible] radicals studied by means of electron paramagnetic resonance.
Zhur.ob.khim. 35 no.12:2140-2145 D '65. (MIRA 19:1)

1. Leningradskiy tekhnologicheskiy institut im. Lensoveta.
Submitted October 2, 1964.

ABDULLAYEV, A.A.; KAPLAN, G.A.; MAL'TSEV, V.I.; SHIYAKHOVSKIY, L.D.

Using mathematical methods to determine the optimal blending formula for aircraft gasolines. Khim. i tekh. topl. i masel 9 no.12:51-56 D '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy i proyektnyy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti i GK PTK.

MAL'TSEV, V.I.; SHARAPOVA, L.V.; YURCHENKO, B.I.

Some problems of the geology and prospects for finding oil and gas in the southwestern part of the Caspian Depression. Geol. nefti i gaza 7 no.3:10-16 Mr '63. (MIRA 16:4)

1. Astrakhanskaya geofizicheskaya ekspeditsiya.
(Caspian Depression--Petroleum geology)
(Caspian Depression--Gas, Natural--Geology)

MARKELYCHEV, B.I.; MAL'TSEV, V.I.

Results of the application of the progressive [illegible].
Stroi. truboprov. 10 no.9:29-30 S '65. (MIRA 18:9)

1. Kombinat Tatneftestroy, Al'met'yevsk.

KITA, Vladimir Frantsevich; MAL'TSEV, V.I., kand. tekhn. nauk, retsenzent; IKONNIKOV, S.A., kand. tekhn. nauk, retsenzent; ARISTOV, Yu.K., inzh., red.; SHLENNIKOV, Z.V., red.

[Reduction gears and couplings in marine power plants] Reduktory i soedinitel'nye mufty v sudovykh silovykh ustanovkakh. Moskva, Transport, 1965. 207 p. (MIRA 18:7)

MAL'TSEV, V.I.

Paramagnetic properties of azo dyes. Part 2: Role of sodium impurity in the generation of an electron paramagnetic resonance signal. Zhur. ob. khim. 35 no.7:1250-1252 Jl '65. (MIRA 18:8)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

MAL'TSEV, V. I. Cand Geol-Mineral Sci -- (diss) "Geological Structure and Prospective Oil-Gas Bearing Capacity of the Mesozoic Deposits in the Western Portion of the Sunzhensk Anticlinal Zone," Astrakhan', 1960, 17 pp, 150 copies (All-Union Sci Res Geological Prospecting Petroleum Institute, "VNIGRI") (KL, 47/60, 99)

MAL'TSEV, V.I.

Tectonic development of the Malokabardian-Sunzha Upland. Trudy Akad. neft. prom. no.3:21-36 '56. (MIRA 10:11)
(Sunzha Range--Geology, Structural)

MALTSEV, VASILIY IVANOVICH

MALTSEV, Vasiliy Ivanovich

MALTSEV, Vasiliy Ivanovich, Academic Degree of Doctor of Philosophical Sciences, based on his defense, 10 January 1955, in the Conference of the Section of Humanities of the Council of Moscow Order of Lenin and Order of Labor Red Banner State U imeni Lomonosov, of his dissertation entitled: "Dialectical Materialism and Questions of Logic." For the Academic Degree of Doctor of Sciences.

SO: Byulleten' Ministerstva, Vysshego Obrazovaniya SSSR, List No 20, 8 October 1955, Decision of Higher Certification Commission Concerning Academic Degrees and Titles.

1. MAL'TSEV, V. I.

2. USSR (600)

4. Logic

7. Teaching of slogism in bourgeois philosophy. Vest. Mosk. un. 8 no. 1 1953

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

presence in the electrolyte lowering the Cd and Tl potentials to more electronegative values and not affecting the In potential. The amounts of KI used varied from 0.3 to 1.2 g mol/l. In this way a method of separating Cd and Tl, as well as all other impurities from In in a single operation has been found. The resulting In is 99.9993 - 99.9998% pure. There are 1 table and 5 figures.

SUBMITTED: May 15, 1961

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S/080/62/035/007/011/013
D202/D307

AUTHORS: Tsyb, P.P. and Mal'tsev, V.I.

TITLE: Investigating the purification of indium from micro admixtures by electrolysis with mercury electrodes

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 7, 1962, 1565-1570

TEXT: The aim of this study was to establish the possibility of indium purification by using a multistage electrolyzer, constructed by VAHITSYAN, which allows several anodic and cathodic processes to be performed in a single operation. The authors were particularly concerned with the elimination of Cd and Tl, as it was previously found that these metals cannot be separated from In amalgam by electrolysis in an H_2SO_4 electrolyte, having potentials very similar to that of In. The authors tested the addition of such compounds which can form sparingly soluble or complex compounds with these elements (disodium salt of EDTA, tartaric acid, Seignette salt, phosphoric acid and KI). KI exhibited the most favorable effect, its

Card 1/2

Nitrogen-containing polymers ...

epr signal is explained by the disappearance of moisture and ions. After passing electric current through them, the polymers showed accumulator properties in that they delivered emf. There is 1 table. The most important English-language reference is: D. Bejl, H, Kainer, A. C. Rose-Innes, J. Chem. Phys., 30, 765, 1959.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta
(Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 6, 1961

S/190/62/004/006/010/026
B101/B110

AUTHORS: Mal'tsev, V. I., Lebedev, V. B., Itskovich, V. A.,

TITLE: Nitrogen-containing polymers with paramagnetic properties

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 848-850

TEXT: Black, insoluble powders with paramagnetic and semiconductor properties were obtained in the course of studying the oxidation of aniline, diphenyl amine, and triphenyl amine by concentrated sulfuric acid. They contained 0.3-1 S atoms per N atom. After heating to 100°C, irradiating with ultraviolet light, passing an electric current through them, or cooling to -180°C, these polymers showed an increased epr signal intensity lasting some months. The authors discuss the origin of paramagnetism in these polymers taking account of published data concerning polydiphenyl aminoquinones or mixtures of quinone and amine powders. Transition of part of the unpaired electrons of nitrogen into the triplet state is assumed. The effects of heating and of electric current on the

Card 1/2

SEDENKOV, Yu.S., inzhener-elektromekhanik; MAL'TSEV, V.G., inzhener-elektromekhanik.

Cleaning of water-drain pipes from hard-substance residues. Ugol' 28 no.8: 42-43 Ag '53. (MLRA 6:7)

1. Shakhta imeni Lenina tresta Kizelugol'. (Mine drainage)

L 42382-65

ACCESSION NR: AP5008691

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsko-tekhnologicheskiy institut trubnoy promyshlennosti, Dnepropetrovsk (All-Union Scientific Research and Technological Design Institute of the Pipe Industry)

SUBMITTED: 05Feb64 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 005 OTHER: 000

Card 2/2

L 12382-65 EWT(m)/EWA(d)/EPR/EWP(t)/EWP(z)/EWP(b) Pe-4 IJP(c) JD

ACCESSION NR: AP5008691 S/0071/65/020/003/0394/0396

AUTHOR: Maltsev, V.F.; Luk'yanenko, L.F.

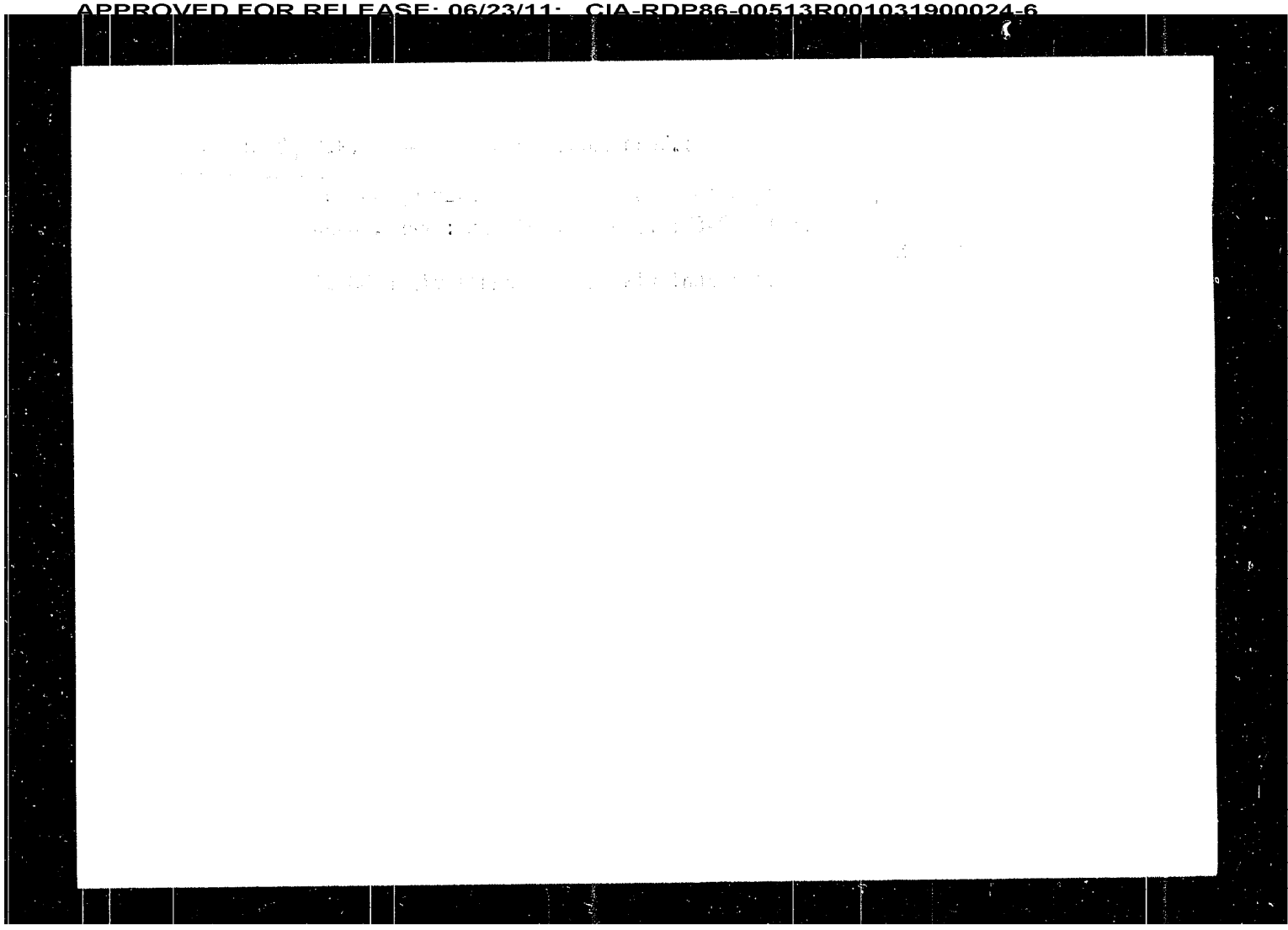
TITLE: Photometric determination of manganese in high-alloy steels and alloys

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 3, 1965, 394-396

TOPIC TAGS: manganese determination, colorimetric analysis, steel analysis, alloy analysis, ground glass blank

ABSTRACT: An FEK-M differential photocolorimeter was used for the determination of manganese in steel and alloys. Instead of a colored blank solution, which frequently introduces errors, the authors used a ground glass with an absorption coefficient corresponding to that of the manganese concentration which should be present in the blank solution. The procedure employed in selecting a ground glass of suitable optical density is described. A calibration curve was then plotted for differential spectrophotometric determinations of manganese in quantities of 0.8% and higher. The results of analyses of standard samples of steels and alloys are tabulated; they were completely satisfactory, despite the fact that the samples contained different amounts of chromium. The entire procedure employed in the determination is given. Orig. art. has: 1 figure and 1 table.

Card 1/2



MAL'TSEV, V.F., doktor tekhn. nauk, prof.; ZASLONSKIY, K.I., kand. tekhn. nauk, dots., retsenzent; FELVIE, E.K., inzh., red.

[Impulse-type variable speed transmission] Impul'sivnye variatory. Izd.2., ispr. i dop. Moskva, Mashgiz, 1963. 278 p. (MIRA 17:8)

MAL'TSEV, V.F., doktor tekhn. nauk, prof.; ZABLONSKIY, K.I., kand. tekhn. nauk, dots., retsenzent; PELEVIN, N.N., inzh., red.; KOZLOV, A.F., red. izd-va; UVAROVA, A.F., tekhn. red.

[Impulsive speed variators] Impul'sivnye variatory. Izd.2. ispr. i dop. Moskva, Mashgiz, 1963. 278 p. (MIRA 16:11)

(Gearing)

MAL'TSEV, V.F., kand.tekhn.nauk, dotsent

Experimental determination of stresses in free-wheeling roller mechanisms. Vest.mash. 41 no.9:37-43 S '61. (MIRA 14:9)
(Mechanical movements)

MAL'TSEV, V.F.

Effect of the initial wedging angle on the durability of free-running roller mechanisms. Stan.i instr. 32 no.7:15-17 Jl '61.
(MIRA 14:6)

(Mechanical movements)

MAL'TSEV, V.F., kand.tekhn.nauk, dotsent

Determining the law of motion for a machine unit with an electric drive. Izv.vys.ucheb.zav.; mashinostr. no.4:14-17 '61. (MIRA 14:6)

1. Odesskiy tekhnologicheskiy institut.
(Machinery, Kinematics of)

MAL'TSEV, V. F.

Doc Tech Sci - (diss) "Study of roller mechanisms of free motion." Moscow, 1961. 19 pp; (Inst of Machine Practice of the Academy of Sciences USSR); 200 copies; price not given; list of author's works on pp 18-19 (16 entries); (KL, 6-61 sup, 212)

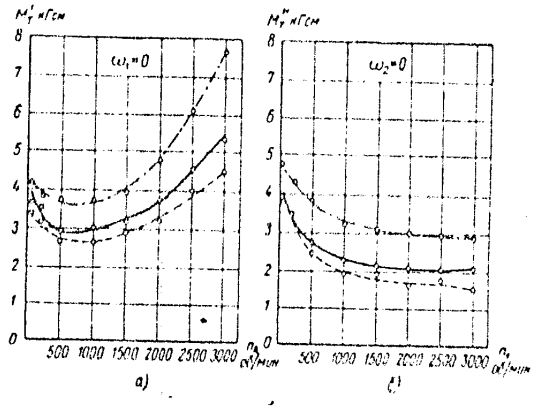
MAL'TSEV, V.F., kand.tekhn.nauk, dotsent

Investigating the wear of free-wheeling roller mechanisms. Vest. mash. 40 no.11:38-44 '60. (MIRA 13:10)
(Mechanical wear)

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

tude Q was limited by the temperature of oil heating ($t = 75 \div 85$). The graphs show that the rotating couple, composed of hub and race, can operate normally at small radial loads: $Q = 10 \div 50$ kg ($q = 0.75 \div 4$ kg/cm^2) for mechanisms with z=3, and $Q = 10 \div 45$ kg ($q = 1.4 \div 6$ kg/cm^2) for mechanisms with $z = 5$. The cited coefficients of total friction f'_{np} and f''_{np} decrease with an increase in stress Q. Figure 9 shows the curves characterizing the effects of the kind of lubrication on the losses during the period of free motion. The parameters of the mechanism were: D = 100 mm, z = 5, P = 0.75 kg, the following lubricants were used: grade 20 industrial oil, grade 45 industrial oil and nigrol. There are 9 figures and 5 references: 3 Soviet and 2 German.

Figure 9:



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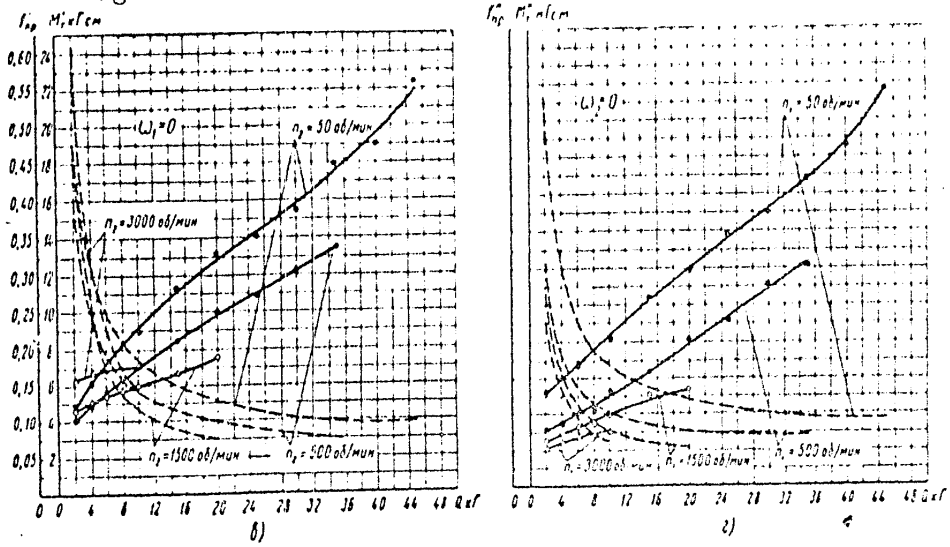
Experimental Ratings of the Losses in Free-Running Roller Mechanisms

at $n_{1,2}$ = 50 and 500 rpm and at radial loads of less than 40 and 50 kg respectively, the moments of friction varied in the range of 5 - 8%. However, an increase in load Q exceeding the cited magnitudes led to a considerable increase in the variations of these moments, which reached 25-40%. During the tests at $n_{1,2}$=1,500 and 3,000 rpm magni-

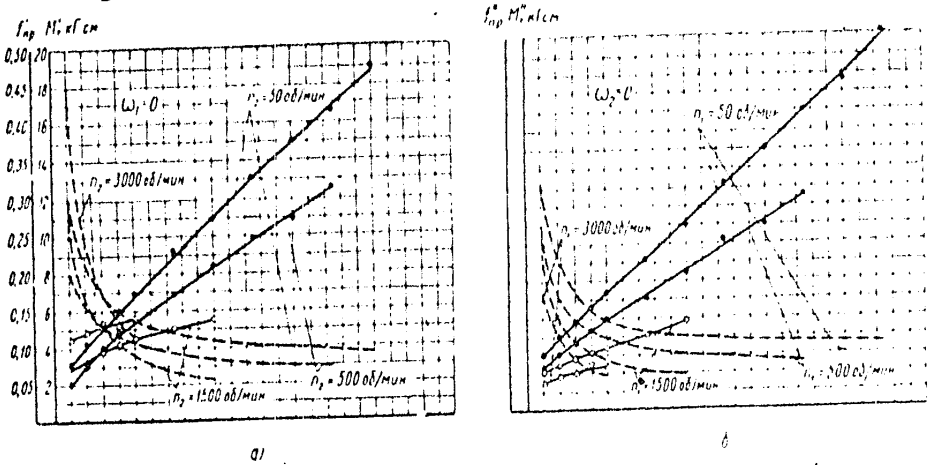
Figure 8 a and b:



Experimental Ratings of the Losses in Free-Running Roller Mechanisms

0.75 kg, mounted without special bearings (Fig. 1, a and 2,a) were loaded with radial stress Q. The surface contacts of race and hub were carried out corresponding to the 3rd class of accuracy. Figures 7 and 8 show the graphs of variation of friction moments M''_T and M'_T and the coefficients of total friction f'_{np} and f''_{np} depending on the radial load Q at four different numbers of revolution of race and hub and two values of the pressure stress. During the tests

Figure 8 a and b:



a) b)

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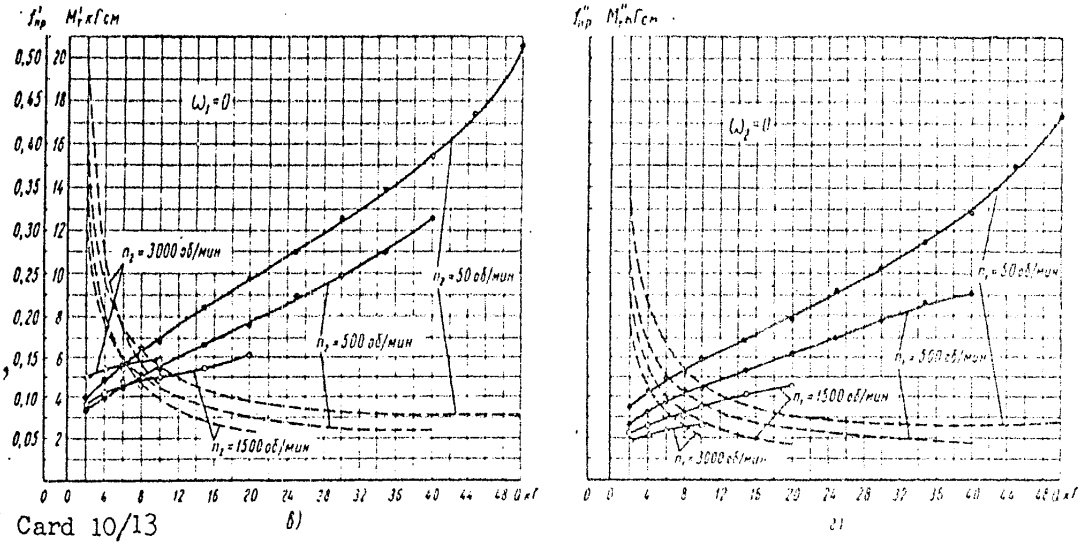
S/121/60/000/011/003/013
A004/A001

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

corresponding to a running fit of 2nd class of accuracy. In the 4th series of tests free-running mechanisms with D = 100 mm, z = 3 and z = 5, P = 0.125 and

Figure 7 в and г:



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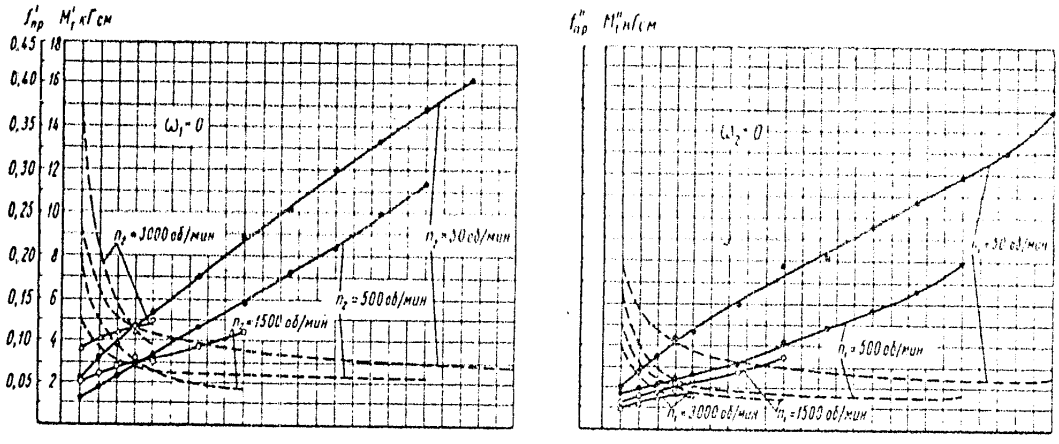
в)

г)

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

race or with stationary hub, an increase in clearance causes friction to grow in mechanisms with stationary race as the angular velocity of the hub increases. For mechanisms operating at n 2,500 rpm, the author recommends to use a magnitude

Figure 7 a and b:



а) б)

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Experimental Ratings of the Losses in Free-Running Roller Mechanisms

Table 2:

Test No. in numerical order	rpm of electric motor	Magnitudes of total moments of friction in kgcm at axial clearances in mm									
		0.02	0.04	0.08	0.21	0.42	0.02	0.04	0.08	0.21	0.42
		M'_T					M''_T				
1	50	3.7	3.8	3.7	3.6	3.6	3.8	3.9	3.8	3.7	3.7
2	100	3.4	3.5	3.5	3.3	3.4	3.3	3.4	3.3	3.2	3.3
3	500	3.0	3.0	2.9	3.4	3.8	2.6	2.6	2.5	2.5	2.5
4	1000	3.1	3.2	3.0	3.9	4.2	2.2	2.3	2.3	2.3	2.4
5	1500	3.3	3.3	3.2	4.4	4.8	2.0	2.0	2.2	2.3	2.6
6	2000	3.7	3.8	3.8	5.0	6.1	2.1	2.0	2.1	2.5	3.2
7	2500	4.1	4.1	4.6	6.9	6.6	2.0	2.0	2.1	2.8	3.3
8	3000	4.7	4.8	5.4	7.5	7.9	2.0	1.9	2.1	2.8	3.2

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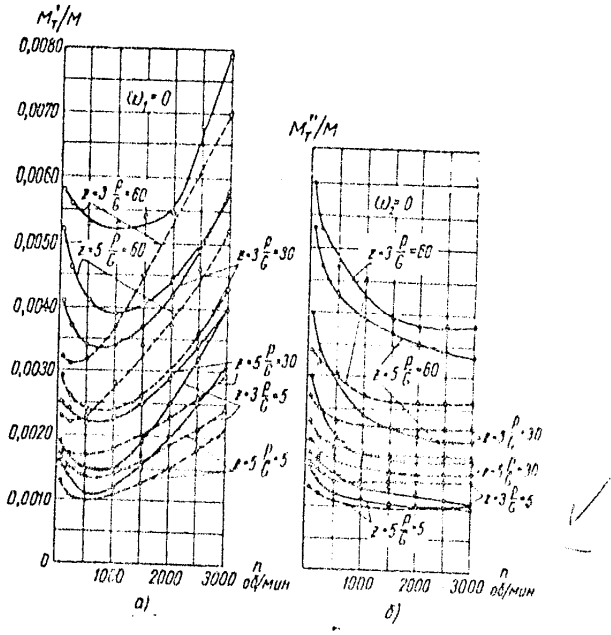
S/121/60/000/011/008/013
A004/A001

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

of tests was carried out to determine the effects of axial clearnace between rollers and cheeks of the mechanism on the magnitude of total losses. The experimental results are presented in Table 2 for m mechanisms with the following basic parameters: D = 100 mm, z = 5, d = 13 mm, $\alpha = 6^{\circ}$, P = 0.75 kg at different axial clearances. It results from the data shown in Table 2 that from the viewpoint of losses in free-running mechanisms an axial clearance of $\delta = 0.08$ mm, corresponding to a running fit of the 3rd class, is the most expedient for mechanisms with $n \leq 2{,}000 \div 2{,}500$ rpm. While a reduction of this clearance affects a decrease in friction in free-running mechanisms only insignificantly, whether with stationary

Figure 5:



Card 7/13

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

with D = 100 mm. Comparing the test [illegible] obtained after preliminary run with those obtained with stationary but it follows that in the range of small angular velocities (up to 500 rpm) the friction losses are about equal in both cases. However, with an increase in velocity exceeding 500 rpm, the total moment of friction forces M'_T begins to surpass the moment of friction M'_{m}, which at 3,000 rpm reaches a magnitude exceeding the moment M'_{m} by 1.6 - 4 times, measured at the same number of race revolutions. The intensity of free-running mechanisms in all cases increases with an increase in pressing stress f, and the rewards of friction in most of the tests rose in proportion to the magnitude of the pressing stress. In order to compare the friction losses taking place during the [illegible] of mechanisms of different dimensions, systems and designs, it is expedient not to carry out a rating according to the magnitude of moments M'_T and M'_{m}, but by the ratio of these moments to torque M transmitted by the mechanism. Figure 5 shows the curves characterizing the variation of the ratio $\frac{M'_T}{M}$ and $\frac{M'_{m}}{M}$ depending on the number of revolutions of cup and pulley. The author points out that concerning friction losses it is more favorable to use mechanisms with a greater number of rollers and a smaller number of rolling elements. The [illegible]

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Experimental Ratings of the Losses in Free-Running [illegible] Mechanisms

sions: $M'_T = (P'_w - P'_n)\,l$, $M''_n = (P''_w - P''_n)\,l$, where M'_T - moment of friction with stationary race; M'_n - moment of friction with stationary hub, P'_w - pressure force of the lever on the scale plate under the effects of friction in the ball-bearings 13 (Fig. 1,δ) when tests are carried out with stationary races, P''_n - the same tests with stationary hub; P'_w - pressure force of the lever on the scale plate during tests with stationary race; P''_n - the same test with stationary hub; l - arm of lever 3. The moments of friction M'_n and M''_n were measured after the heat conditions were established. During the first test series the effect of the wedging angle α on the friction in the free-running mechanism was determined. The tests showed that variations of the wedging angle in the range of 2 - 10° practically did not affect the magnitude of friction losses. The second test series were carried out with mechanisms having special bearings. During these tests the rate of revolution of the electromotor shaft and stress P of the pressure spring were varied. According to the test results the curves of friction variations depending on the angular speed of the hub ω_2 or race ω_1 were plotted for three values of stress of the pressure spring: P = 0.015, 0.09, and 0.18 kg for mechanisms with D = 52 mm; P = 0.125, 0.15, and 1.5 kg for mechanisms

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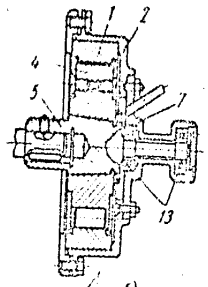
Experimental Ratings of the Losses in Free-Running Roller Mechanisms

S/121/60/000/011/003/013
A004/A001

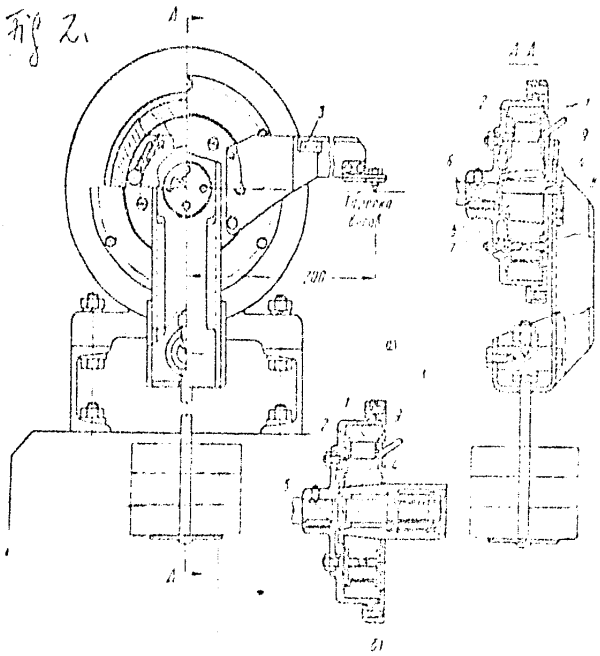
of the devices on which the tests of the two versions of mechanisms were carried out. Moreover, as to the members of rotation, two different types were tested: stationary racing and rotating hub (Fig. 1), and stationary hub and rotating race. The losses in free-running mechanisms were determined depending on the angular velocity of the race (hub), pressing stress P and grade of lubrication. Prior to the tests the mechanisms were run in for 30 hours at 1,000 rpm of the electromotor. The total moment of friction of the mechanism was determined by one of the following expres-

Figure 1 б:



а, б)

Fig 2.



Card 4/13

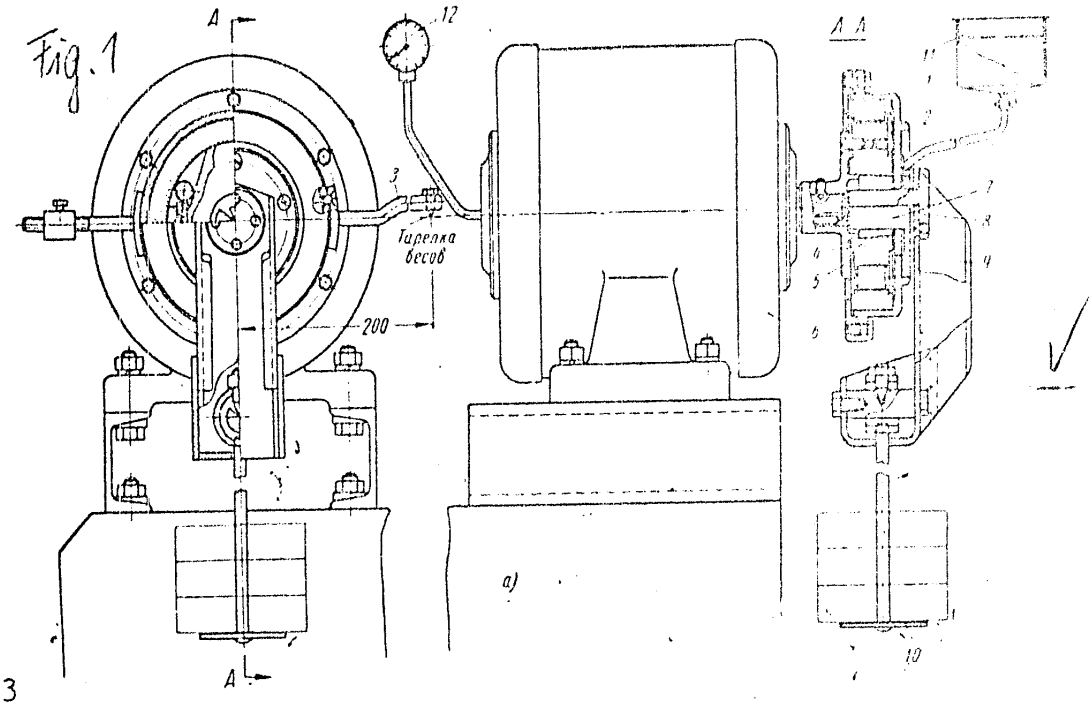
Figure 2:

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

S/121/60/000/011/002/013

Figure 1:

Fig. 1



Card 3/13

Experimental Ratings of the Losses in Free-Running Roller Mechanisms

S/121/60/000/011/[illegible]/[illegible]
A004/A001

Table 1:

Numerical order of specimen of mechanism being tested	Parameters of Mechanism				
	Number of rollers z	Diameter in mm: of race aperture D	Diameter in mm: of roller d	Roller length in mm	Distance between working planes of rollers in mm
1	3	52A	[illegible]	12X[illegible]	19.8[illegible] $_{-0.02}$
2	5				
3	3	100A	[illegible]	[illegible]	3[illegible] $_{-0.04}$
4	5				

ically, the magnitude of total friction in free-running mechanisms should be determined experimentally. The author distinguishes between two versions in the design of bearings for free-running mechanisms: 1) the mechanism is mounted on bearings, especially provided for in the design, 2) the mechanism is mounted without bearings. The tests to determine the friction losses were carried out separately for each individual version. Figures 1 and 2 show the general view

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900024-6

S/121/61/000/011/005/013
A004/A001

AUTHOR: Mal'tsev, V. F.

TITLE: Experimental Ratings of the Losses in Free-Running Roller Mechanisms

PERIODICAL: Stanki i Instrument, 1960, No. 11, pp. 18-22

TEXT: The author reports on basic work carried out at the Odesskiy tekhnologicheskiy institut im. I. V. Stalina (Odessa Technological Institute im. I. V. Stalin) to investigate by experiments the free-running period of radial mechanisms of four types whose design was carried out according to the standards of machine tool construction. Table 1 shows the main parameters of the mechanisms being investigated. Wedging angle $\alpha = 5°$, angle of clamp setting $\beta = 75°$, the finish of the working surfaces was: races - of the 8th class, hub - of the 8th-9th class, rollers - of the 9th-12th class. Since the magnitude of the total moment of friction in free-running mechanisms depends on the design, geometric parameters of basic members, machining finish of the friction surfaces, lubrication properties, operation temperature, magnitude of angular velocities of the races and hubs, elastic properties of the material, clamping force, number of rollers and their weight, and since all these factors cannot be taken into account theoret-

Card 1/13

Conference on Steplessly Controlled Mechanical Drives and Flexible Coupling Drives

of Technical Science and A. I. Luizo, Engineer (Odessa Technological Institute imeni Stalin), reported on investigations of mechanisms of unrestricted modification of pulse variators. Their work made it possible to increase the durability of roller mechanisms by 2.5-3 times. The Conference decided to ask the Gosplan SSSR and the Komitet po avtomatizatsii i mashinostroyeniyu pri Sovete Ministrov SSSR (Committee at the Council of Ministers of the USSR for Automation and Mechanical Engineering) to organize the centralized production of several systems and designs of variators and, in the first place, stepless gears with wide V-belts for capacities up to 20-25 kw, as well as tore variators of the modernized TsNIITMASh design (with textolite rollers) for up to 20 kw power, and complex units of V-belt controlled gears with standard belts and regulation range of 1.5-2 for capacities up to 50 kw.

Conference on Steplessly Controlled Mechanical Drives and Flexible Coupling Drives

variators in the drives of air separators and vibro-drilling machines. P. A. Pronin, Candidate of Technical Science, of the Moskovskiy avtomekhanicheskiy institut (Moscow Automechanical Institute) reported on the results of thorough investigations of variators with wide V-belts. I. I. Vorob'yev, Candidate of Technical Science (ENIMS), read a report on the Institute's work in the field of variators with wide V-belts. N. B. Dunayev, Engineer (Khimapparatproyekt), gave a detailed account of a calculation method of block and belt variators developed by the Projecting Institute. V. M. Kugusheva, Engineer, of the Leningradskiy politekhnicheskiy institut imeni Kalinina (Leningrad Polytechnic Institute imeni Kalinin) has developed an original method of measuring the temperature in the interior parts of operating V-belts with the aid of miniature thermocouples. P. A. Lebedev, Candidate of Technical Science, of the Leningradskiy tekstil'nyy institut imeni Kirova (Leningrad Textile Institute imeni Kirov) explained the theory and principles of the stepless gear with automatically controlled transmission numbers, developed by him. I. S. Orlik, Engineer (Odessa Technological Institute imeni Stalin) reported on the results of investigating V-belt variators with grooved disks. V. F. Mal'tsev, Candidate

Card 3/4

Conference on Steplessly Controlled Mechanical Drives and Flexible Coupling Drives

developing tore variators. He stated that a so-called "automator", which ensured the reversing of the output shaft, was developed, which represents the combination of tore variator and planetary mechanism. This "automator" can be used as servo-mechanism for remote and automatic controls. The report of A. T. Kemurdzhian treated the use of stepless friction gears with steel pulleys for operation with increased contact stresses. He indicated the possibility of friction gears with contact stresses up to 21,000 kg/cm^2. I. V. Bakh, Engineer, reported on problems connected with the design of stepless friction gears of high efficiency. Ye. I. Pirozhkov read a report on "The Synthesis of Stepless Planetary Friction Gears with Balanced Planet Pinions". V. P. Dymovskiy, Engineer (Odessa Polytechnic Institute) presented interesting material on the traction properties of friction gears. V. S. Porokhov of the Institut mashinovedeniya AN SSSR (Science of Machines Institute of AS USSR) gave an account of the results of experimental investigation on the nature of changes of friction forces during frictional rolling motion of lubricated rollers. V. Rybin of the Akademiya stroitel'stva i arkhitektury SSSR (Academy of Building and Architecture of the USSR) reported on the operational results of tore

Card 2/4

S/117/60/000/005/012/013
A004/A002

AUTHORS: Mal'tsev, V. F., Kogan-Wol'man, G. I., Candidates of Technical Science

TITLE: Conference on Steplessly Controlled Mechanical Drives and Flexible Coupling Drives

PERIODICAL: Mashinostroitel', 1960, No. 5, p. 43

TEXT: By the end of 1959, the Odessa NTO Mashproma and the Odesskiy tekhnologicheskiy institut imeni Stalina (Odessa Technological Institute imeni Stalin) convened a conference on problems of calculation, designing, manufacturing technology and operation of steplessly controlled mechanical drives and flexible coupling drives. More than 100 delegates from enterprises and scientific institutions of all important towns of the Soviet Union participated. N. I. Kolchin, Doctor of Technical Sciences, read a report on the effects of centrifugal forces on the traction properties of belt drives of various types. V. F. Mal'tsev, Candidate of Technical Science, Odessa Technological Institute imeni Stalin, elucidated the present state of mechanical stepless drives. G. A. Revkov (TsNIITMASh) reported on the results of

Card 1/4

silicates; the determination of small amounts of nitrogen in metals and alloys; the accelerated determination of calcium oxide in molten agglomerations, blast-furnace and open-hearth slags, limestone, and dolomite; various amperometric and trilonometric analyses and other methods. The development of the following methods is mentioned as the main task for further studies: the analytical chemistry of titanium, zirconium, tantalum, molybdenum, tungsten, and rare and trace elements, methods for the determination of small amounts of aluminum, chromium, vanadium, nickel, as well as methods of the phase analysis, in particular of ores and non-metallic inclusions. A mechanization of the supply of samples to the laboratory as well as an acceleration of the manufacture of samples was also demanded.

18(C)

SOV/32-25-4-67/71

AUTHORS: Lev, I. Ye., Mal'tsev, V. P.

TITLE: Conference on Chemical Production Control in the Metallurgical and Metal-working Industries (Soveshchaniye po khimicheskomu kontrolyu proizvodstva v metallurgicheskoy i metallo-obrabatyvayushchey promyshlennosti)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, p 509 (USSR)

ABSTRACT: In June 1958 the IV Ukrainskoye respublikanskoye soveshchaniye rabotnikov khimicheskikh laboratoriy (IV. Conference of the Workers in Chemical Laboratories of the Ukrainian Republic) was held at Dnepropetrovsk. There were 302 delegates representing 65 plants and 31 scientific research- and educational institutions. The existing GOST-methods of chemical analyses were discussed and it was stated that these methods are obsolete, and that there are no standards at all available for some analyses. On the basis of these statements a number of analysis methods are suggested for introduction in plant laboratories, such as the photo-colorimetric determination of silicic acid and aluminum oxide in refractory aluminum

Card 1/2

MAL'TSEV, V.F., dotsent, kand.tekhn.nauk

Dynamics of friction ratchets. Izv.vys.ucheb.zav.; mashinostr. no.1:21-29 '59. (MIRA 13:3)

1. Odesskiy tekhnologicheskiy institut.
(Gearing)

Freewheeling Roller Clutches SOV/3260

AVAILABLE: Library of Congress

Card 4/4

VK/mas
4-25-60

Freewheeling Roller Clutches SOV/3260

Card 3/4

Freewheeling Roller Clutches SOV/3260

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2-12)

PHASE I BOOK EXPLOITATION SOV/3260

Matveev, Vasiliy Fedorovich

Rolikovyye mekhanizmy svobodnogo khoda (Freewheeling Roller Clutches) Moscow, Mashgiz, 1959. 178 p. 6,000 copies printed.

Reviewer: M.P. Bondar', Candidate of Technical Sciences, Docent; Ed.: M.S. Soroka; Chief Ed. (Southern Division, Mashgiz): V.K. Serdyuk, Engineer.

PURPOSE: This book is intended for technical personnel in the machine and instrument industries.

COVERAGE: The book deals with constructions of freewheeling clutches, the dynamics of machine units with freewheeling clutches, and the theory of the action and motion of freewheeling mechanisms. Methods of strength and rigidity calculations for elements of the freewheeling mechanism are presented. No personalities are mentioned. There are 46 references: 36 Soviet, 6 English, and 4 German.

Card 1/4

MAL'TSEV, V.F.

25(1) PHASE I BOOK EXPLOITATION SOV/2931

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957

Raschet, konstruirovaniye i issledovaniye peredach; trudy konferentsii..., vyp. 3 (Design, Construction, and Analysis of Transmissions; Transactions of a Conference on Problems in Design, Construction, and Analysis of Gears and Flexible Transmissions, No. 3) /Odessa/ Izd. Odesskogo politekhn. in-ta, 1959. 124 p. 3,000 copies printed.

Sponsoring Agencies: Odesskiy politekhnicheskiy institut, and Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Odesskoye oblastnoye pravleniye.

Ed.: I. P. Nikiforov, Engineer; Editorial Board: L. S. Borovich, Candidate of Technical Sciences; M. S. Belyayev, Engineer; M. D. Genkin, Candidate of Technical Sciences; K. I. Zablonskiy, (Resp. Ed.) Candidate of Technical Sciences; P. S. Zak, Candidate of Technical Sciences, Ya. G. Kist'yan, Candidate of Technical Sciences; V. N. Kudryavtsev, Doctor of Technical Sciences; V. F. Mal'tsev, Candidate of Technical Sciences; M. S. Polotskiy, Candidate of Technical Sciences; and L. B. Erlikh, Candidate of Technical Sciences; Tech. Ed.: A. R. Komissarenko.

PURPOSE: This book is intended for design engineers in the machine-building and automotive industries, particularly gear designers.

COVERAGE: The technical papers contained in this book were originally presented at a conference on gear design held in Odessa in 1957. A number of papers deal with the causes of failure in modern gear drives under such severe service conditions as seizing and jamming. To determine these causes a study was made of the wear resistance of contact surfaces and the rigidity of gear teeth under load. Various gear drives and systems of engagement, including the Novikov-type gears, which are claimed to have many superior characteristics, and the double-enveloping type of worm gear drive are compared. A study is made of the rigidity of gear drives, particularly the rigidity of splined gear-to-shaft joints. A number of gear-testing methods and devices are also listed. No personalities

V-belt Variable Speed Drive with a Wide Control Range

output. An analysis of several sizes is given. Typical values of the speed range are 2 500 rpm down to zero and reversal up to 500 rpm. Test-bed results at a nominal output torque of 7.16 kgm gave an efficiency of 92% at a speed ratio of 1, 85% at a speed ratio of 0.58, and 72% at a speed ratio of 15. The pre-tension of the belts was 15 kg/cm^2.

There are 2 figures, 1 table and 4 references, 2 of which are Soviet, 1 English and 1 German.

1. Mechanical drives--Control systems 2. Belts--Applications
3. Machines--Operation 4. Speed regulators--Equipment

Card 2/2

SOV/122-58-8-9/29

AUTHORS: Mal'tsev, V.A., Candidate of Technical Sciences, Docent, and Kovalev, P.A., Engineer

TITLE: V-belt Variable Speed Drive with a Wide Control Range (Klinoremennoy variator s shirokim diapazonom regulirovaniya)

PERIODICAL: Vestnik mashinostroyeniya, 1958, Nr 8, pp 27-29 (USSR)

ABSTRACT: A V-belt type variable speed transmission developed at the Odesskiy tekhnologicheskiy institut (Odessa Technological Institute) is described which has a wider range of speed adjustment, within the same bulk, than known types. The basic design consists of a spur gear differential train wherein the two parallel input branches are V-belt driven from the same motor shaft. Each V-belt transmission has driven and driving pulleys of variable width. The two transmissions are adjusted by a handwheel through a screw mechanism. The adjustment is differential. Therefore, the output shaft of the differential gear train has a range of speed ratio adjustment several times greater than each of the input branches. The unit can also reverse the direction of the

Card 1/2

MAL'TSEV, V.F., kand.tekhn.nauk, dots.

Theory of free-wheeling mechanisms with eccentric rollers. Izv. vys.ucheb.zav.; mashinostr. no.6:27-33 '58. (MIRA 12:8)

1. Odesskiy tekhnologicheskiy institut.
(Mechanical movements)

On the Question of the Theory and Calculation of Idler Mechanisms

parameters of the mechanism, the sprocket's working surface is made cylindrical with guides in the form of a circle or a logarithmic spiral. The geometry of the roller mechanisms is examined with an inner and outer sprocket as well as the forces acting on the roller during the free wheeling of the mechanism. Finally, a formula is produced for the total moment of friction of all rollers, and for the power lost through friction. There are 3 sectional diagrams, 5 diagrams and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: Odesskiy politekhnicheskiy institut (Odessa Polytechnical Institute)

SOV/146-1-1-11/22

AUTHOR: Mal'tsev, V.F., Candidate of Technical Sciences

TITLE: On the Question of the Theory and Calculation of Idler Mechanisms (K voprosu teorii i rascheta mekhanizmov svobodnogo khoda)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Priborostroyeniye, 1958, Nr 1, pp 73-81 (USSR)

ABSTRACT: The idler mechanisms investigated in this paper are roller mechanisms which as a result of several advantages displace ratchet geared mechanisms. The typical design which is discussed in this paper consists of the following elements: external clamp, sprocket, rollers, thrust pads and a spring. Ball bearings can also be used in place of rollers for small torques. The main parameter which determines correct functioning is the angle between the tangent from the contact point of the roller with clamp and sprocket working surfaces - the wedging angle. In order to reduce change in this angle with a change in the basic

Card 1/2

MALTSEV, V. F.

V. F. Maltsev, "On the Theory of Frictionless Motion of Roller Mechanisms."

paper presented at the 2nd All-Union Conf. on Fundamental Problems in the Theory of Machines and Mechanisms, Moscow, USSR, 24-28 March 1958.

25(2) PHASE I BOOK EXPLOITATION SOV/2223

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957

Raschet, konstruirovaniye i issledovaniye peredach; trudy konferentsii, [tom] 2 (Design, Construction, and Analysis of Transmissions; Transactions of a Conference on Problems in Design, Construction, and Analysis of Gears and Flexible Transmissions, Vol 2) [Odessa] Odesskiy politekhn. in-t, 1958, 94 p. 3,000 copies printed.

Sponsoring Agencies: Odesskiy politekhnicheskiy institut, and Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Odesskoye oblastnoye pravleniye.

Ed.: I.P. Nikiforov, Engineer; Tech. Ed.: A.R. Komissarenko; Editorial Board: L.S. Borovich, Candidate of Technical Sciences, M.S. Belyayev, Engineer, M.D. Genkin, Candidate of Technical Sciences, K.I. Zablonskiy, Candidate of Technical Sciences (Resp. Ed.), F.S. Zak, Candidate of Technical Sciences, Ya. G. Kist'yan, Candidate of Technical Sciences, V.N. Kudryavtsev, Doctor of Technical Sciences, V.F. Mal'tsev, Candidate of Technical Sciences, M.S. Polotskiy, Candidate of Technical Sciences, and L.B. Erlikh, Candidate of Technical Sciences.

PURPOSE: The book is intended for engineers and technicians working in the field of transmissions.

COVERAGE: This second volume contains articles on variable-speed drives, flexible shafts, wire-rope v-drive, hook-joint and roller chains, and friction gears. Theoretical and design problems are presented in the first volume. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

Card 4/5

SOV/124-58-4-3746

Theory of the Dead-centering Process (cont.)

friction on the surface of contact between the roller P and the inner race. The experiments conducted by the author have indicated that roller mechanisms are capable of self-dead centering and have demonstrated fairly well an agreement with the offered formulas. Critical notes on the existing theory of self-dead centering are given.

L. K. Gordiyenko

1. Roller bearings--Theory

Card 2/2

SOV/124-58-4-3746

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 12 (USSR)

AUTHOR: Maltsev, V. F.

TITLE: Theory of the Dead-centering Process in a Roller Mechanism of the Free-wheeling Type (Teoriya protsessa zaklinivaniya rolikovogo mekhanizma svobodnogo khoda)

PERIODICAL: Tr. Odessk. tekhnol. in-ta, 1957, Vol 8, pp 69-73

ABSTRACT: The article describes a theory for the process of self-dead centering of roller mechanisms of a free-wheeling type. Through an analysis of the forces acting on a roller P during the process of dead centering it has been found that the condition of self-dead centering for low-speed roller mechanisms of a free-wheeling type is as follows:

$$\alpha \leqslant 2 \tan^{-1}\{(2 r f_1 f_2 + K_2 f_1 - K_1 f_2)/[r(f_1+f_2) + K_2 - K_1]\}$$

where α is the angle of dead centering; r is the radius of the roller P; f_1 and K_1 are the coefficients of sliding and rolling friction on the surface of contact between the roller P and the outer race; f_2 and K_2 are the coefficients of sliding and rolling

Card 1/2

Tests on Infinitely Variable V-Belt Transmissions with Standard Belts.

attached to each housing on indicating scales. The rotational speeds were measured by counters. The pre-tensioning was set in accordance with the maxima recommended by "TsNIITMASh", namely 12 and 15 kg/cm^2. The curves of the slip percentage against the tension coefficient are plotted for the smooth and grooved pulleys at both pre-tension values. From these, obtained at different transmission ratios, curves of transmission efficiency against torque are derived. At a small rpm of the driven shaft the grooved pulley showed a slight increase in efficiency but it suffers a reduction of the maximum possible efficiency, reached in both cases at a transmission ratio of 1(5% at 12 kg/cm^2 pre-tension and 10% at 15 kg/cm^2 pre-tension). There are 6 graphs, 1 photograph and 3 figures. There are 5 references, of which 2 are Slavic.

AVAILABLE: Library of Congress.

MAL'TSEV, V.F.

122-5-8/35

AUTHORS: Mal'tsev, V.F. (Cand.Tech.Sc., Dotsent) and Orlik, I.S. (Engineer).

TITLE: Tests on Infinitely Variable V-Belt Transmissions with Standard Belts (Ispytaniya klinoremennykh besstupenchatykh peredach so standartnymi remnyami)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, Nr 5, pp.19-23 (USSR)

ABSTRACT: An infinitely variable speed V-belt transmission with axially displaceable V-belt pulley halves is illustrated, which has three V-belts in parallel. A cross-sectional drawing shows the control mechanism which displaces the moving parts of the two V-pulleys simultaneously at the driving and driven end by the rotation of two worm gears connected through a universally joined transmission shaft. To increase the range of the transmission ratio up to 5 the V-pulley halves must be grooved so as to mesh over part of the face like the teeth of a dog clutch. A transmission of this type is illustrated. Tests are reported designed to measure the load capacity of grooved V-pulleys. The driving pulley was mounted on the shaft of an electric motor with a trunnion mounted housing. The driven pulley was mounted on the shaft of a water brake. The torques of both the electric motor and the water brake were measured by resting the ends of levers

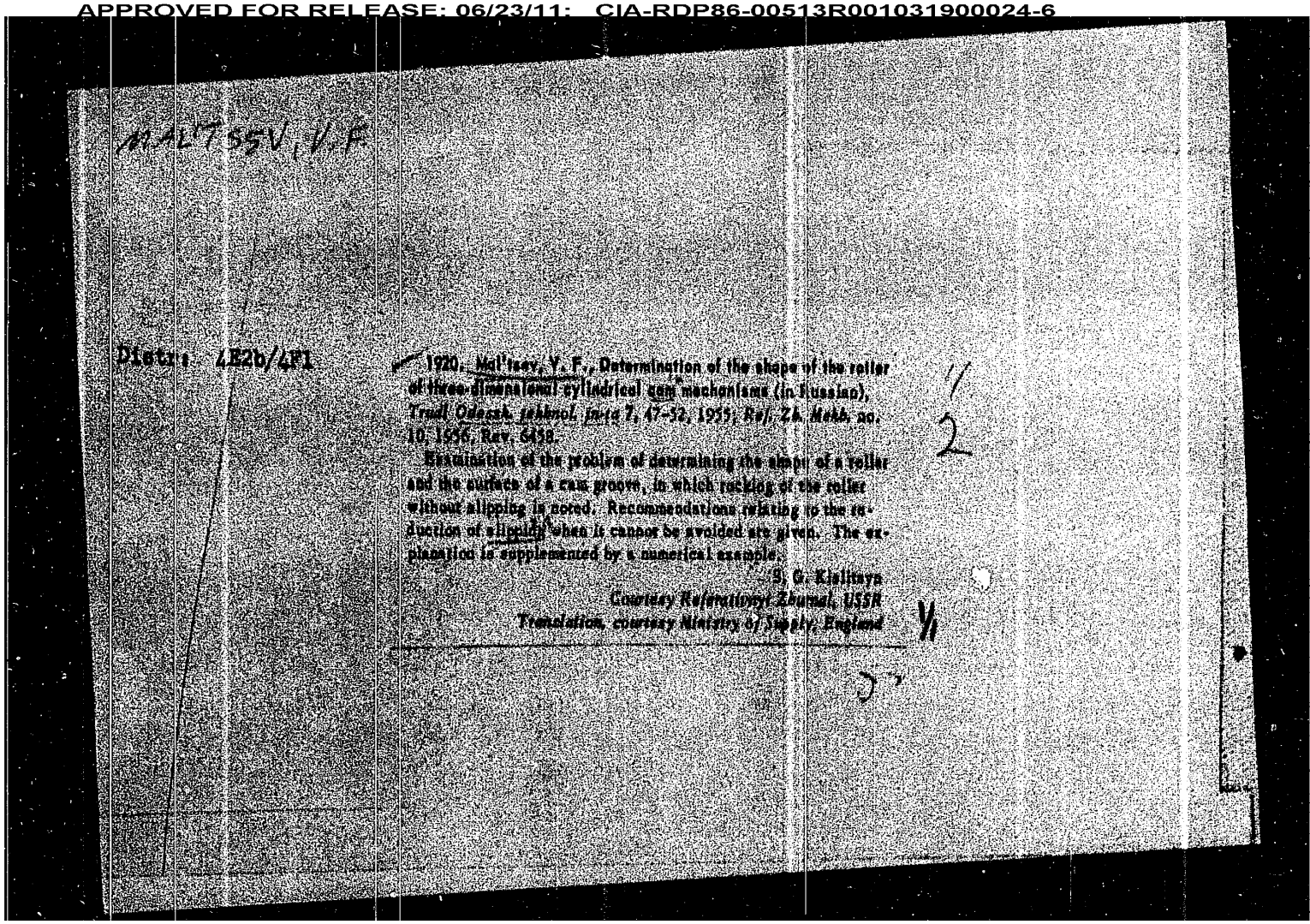
Card 1/2

MAL'TSEV, V.F., kandidat tekhnicheskikh nauk, dotsent.

Strength and rigidity calculations for freewheeling mechanisms.
Vest. mash. 36 no.6:12-17 Je '56. (MLRA 9:10)

(Roller bearings) (Clutches (Machinery))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900024-6



MAL'TSEV, V. F.

Distr: 4E2b/4F1

1920. Mal'tsev, V. F., Determination of the shape of the roller of three-dimensional cylindrical cam mechanisms (in Russian), *Trudi Odessk. tekhnol. insta* 7, 47-52, 1955; *Ref. Zh. Mekh.* no. 10, 1956, Rev. 6458.

Examination of the problem of determining the shape of a roller and the surface of a cam groove, in which rocking of the roller without slipping is aored. Recommendations relating to the reduction of slipping when it cannot be avoided are given. The explanation is supplemented by a numerical example.

—S. G. Kislitsyn

Courtesy Referativnyi Zhurnal, USSR

Translation, courtesy Ministry of Supply, England

USSR/ Engineering

Card 1/1 Pub. 128 - 6/26

Authors : Mal'tsev, V. F.

Title : An experimental investigation of a noiseless eccentric transmission

Periodical : Vest. mash. 2, 30-31, Feb 1954

Abstract : Operational tests were conducted to determine the efficiency of a noiseless eccentric transmission used on various industrial equipment. Efficiency results are given, together with the description of the above mentioned component. Drawings.

Institution : .....

Submitted : .....

MAL'TSEV, V.F., kandidat tekhnicheskikh nauk.

Wedge-shaped, direct transmission with standard belts. Vest.mash. 33 no.10: 19-24 O '53. (MLRA 6:10)

(Belts and belting)

MAL'TSEV, V.F., kandidat tekhnicheskikh nauk.

Calculating the strength of free moving roller sleeves. Vest.mash. 33 no. 5:19-21 My '53. (MLRA 6:5)
(Couplings)

1. MAL'TSEV, V. F.

2. USSR (600)

4. Couplings

7. Theory of freewheel roller coupling, Vest. mash., 32, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

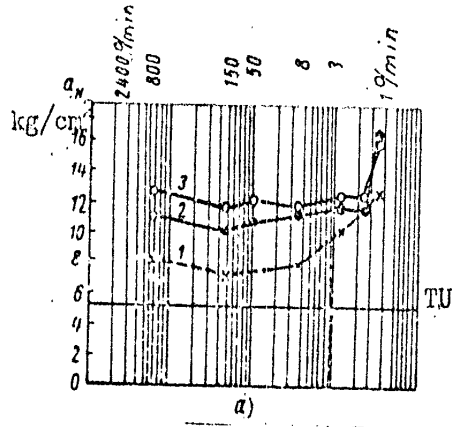
MAL'TSEV, V.F., kandidat tekhnicheskikh nauk; STANISLAVSKIY, N.A., inzhener, redaktor; PRITSKER, G.S., tekhnicheskiy redaktor.

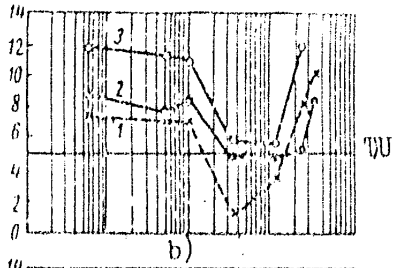
[Impulse stepless transmissions] Impul'sivnye besstupenchatye peredachi. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1951. 122 p. (MLRA 8:8)
(Power transmission)

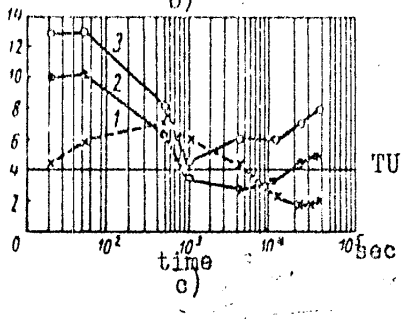
L 40[illegible]-66

ACC NR: AP6010094

Fig. 1. Change in the impact viscosity as a function of the cooling rate: a - steel 12Kh1MF, 950C; b - 12Kh1MF, 1050C; c - 15Kh1MF, 1000--1070C; 1 - without tempering; 2 - after tempering at 700C; 3 - after tempering at 750C.







Orig. art. has: 2 tables and 6 graphs.
SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 003

Card 2/2 hs

L 46252-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6010094 (N) SOURCE CODE: UR/0129/66/000/003/0039/0044

AUTHORS: Dolinskaya, L. A.; Mal'tsev, V. F.; Beylinova, T. A.; Krivosheyeva, A. A.; Kosaya, A. I.; Vashchilo, T. P.

ORG: Ukrainian Scientific Research Institute for Pipes (Ukrainskiy nauchno-issledovatel'skiy trubnyy institut)

TITLE: Embrittlement during tempering of chromium-molybdenum-vanadium steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1966, 39-44, and insert facing p. 49

TOPIC TAGS: TEMPERING, MOLYBDENUM STEEL, alloy steel, chromium steel, vanadium steel, pearlitic steel, austenite steel / 12Kh1MF steel, 15Kh1M1F steel

ABSTRACT: The influence of the temperature of austenization, of the cooling rate after austenization, and of tempering temperature on the structure of several specimens of 12Kh1MF and 15Kh1M1F steels was studied. The work supplements the results of L. A. Dolinskaya (Stal', 1963, No. 3). The chemical composition (percent carbides), microstructure, and coercive strength of the tempered specimens were determined. The experimental results are presented in graphs and tables (see Fig. 1). It was found that both steels, 12Kh1MF and 15Kh1M1F, tend to embrittlement as a result of tempering at 500--700C. It is concluded that the chief cause for the embrittlement in pearlitic steels during tempering is the formation of carbides resulting from the dissociation of intermediate structures.

Card 1/2 UDC: 620.178.154.2:669.14.018.46

NOWAK, V.P.; MAL'TSEV, V.F.; BOGOVINA, V.I.

Photometric determination of vanadium in the phase analysis of alloys. Zav.lab. 31 no.3:295 '65.

(MIRA 18:12)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.

NOVAK, V.P.; GOLOVINA, V.I.; MAL'TSEV, V.F.

Photocolorimetric method for determining fluorine in the presence of phosphate ions in pickling solutions. Zav.lab. 31 no.3:278-279 '65. (MIRA 18:12)

NOVAK, V.P.; BOGOVINA, V.I.; MAL'TSEV, V.F.

Determination of phosphates in parkerization solutions by amperometric titration. Zav. lab. 31 no.2:159-160 '65. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.

MAZAN, I.K.; MALITSEV, V.F.

Mutual influence of ... during the determination of manganese in ... by the ... and operating conditions. Zav. lab. 31 no.1:47-50 '65.

(MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy rudnyy institut.

NOVAK, V.P.; REZNIK, B.Ye.; MAL'TSEV, V.F.

Amperometric titration of fluorine ions with zirconium salts.
Zhur. anal. khim. 20 no.8:827-830 '65. (MIRA 18:10)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut, Dnepropetrovsk.

L 29882-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AR6005812 SOURCE CODE: UR/0137/65/000/010/K006/K006

AUTHOR: Sych, V. Ya.; Mal'tsev, V. F.; Mal'chenko, L. P.

TITLE: Methods of hydrogen determination in titanium-alloy products

SOURCE: Ref. zh. Metallurgiya, Abs. 10K35

REF SOURCE: Sb. Proiz-vo trub. Vyp. 15. M., Metallurgiya, 1965, 135-136

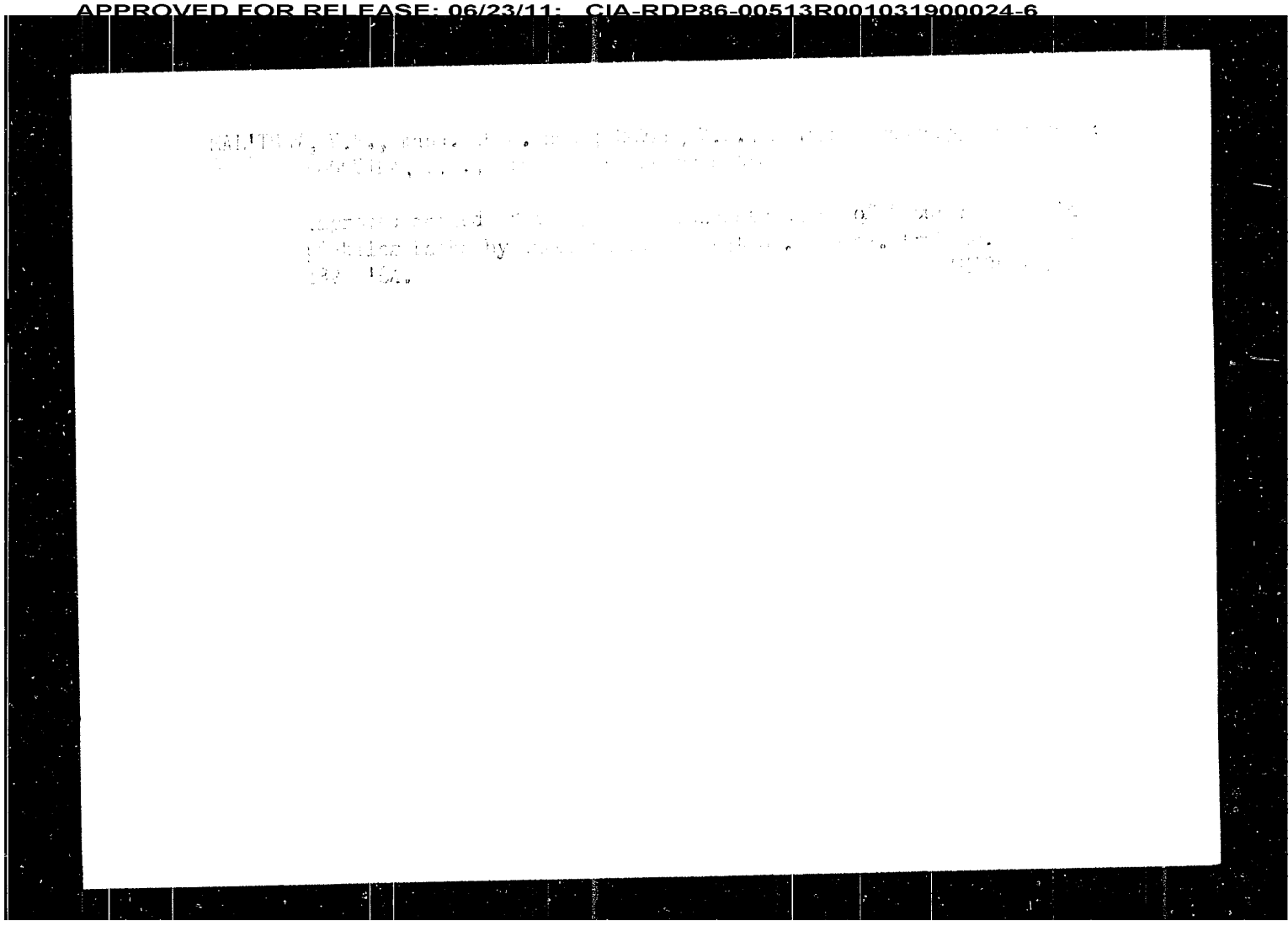
TOPIC TAGS: titanium alloy, hydrogen, vacuum melting, hydrogen determination

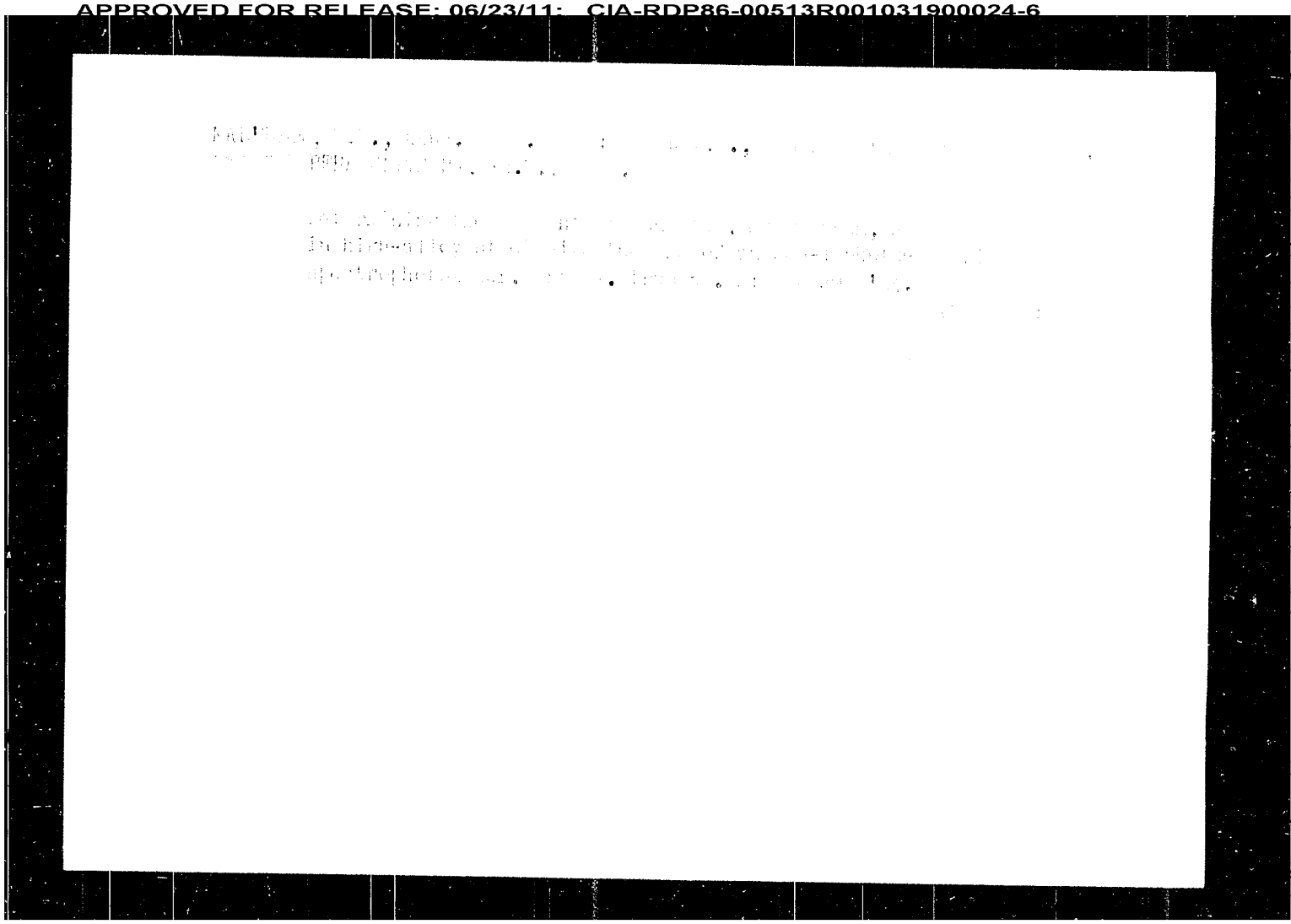
ABSTRACT: Data have been compared concerning the H determination in Ti alloys by the vacuum-heat method at 1300C and by the vacuum-melting method at 1700C. The results obtained by the two methods differ only slightly. It was shown that pickling of samples does not lead to significant saturation of titanium with hydrogen. V. Romanova. [Translation of abstract.] [NT]

SUB CODE: 11/ SUBM DATE: none/

Card 1/1

UDC: 669.788:543.27





MAL'TSEV, V.F.; kand. khim. nauk; KAFAROVA, Yu.N., inzh.

Excluding the effect of chromium in the photocolorimetric method of determining phosphorus in steel and alloys high in addition elements. Proizv. trub no.10:119-121 '63.

(MIRA 17:10)

HAL'TSOV, V.F., kand. khim. nauk; SYCH, V.Ya., inzh.

Phototurbidimetric determination of small contents of carbon in steel and alloys high in addition elements. Proizv. trub no.10: 114-119 '63. (MIRA 17:10)

BOGOVINA, V.I.; NOVAK, V.P.; MAL'TSEV, V.F.

Amperometric titration of bivalent iron ions in oxalate baths with a solution of cerium (IV) sulfate. Zav. lab. 29 no.6:654-655 '63. (MIRA 16:6)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Iron--Analysis)
(Conductometric analysis)

Comparative evaluation of electrolytic ... S/137/62/000/[illegible]
A052/A101

Isolation by dissolving chips in an acid can be applied only to determine the relative Ti carbide content in steel, since the curves obtained both with this and the electrolytic method have the same character. For dissolving chips it is better to use 8-normal H_2SO_4.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/005/144/157
A052/A101

AUTHORS: Luk'yanenko, L. P., Mal'tsev, V. F., Diomidova, L. A.

TITLE: Comparative evaluation of electrolytic and acid methods of titanium carbide isolation out of 1Kh18N9T (1Kh18N9T) steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 5, abstract 5A24 (V sb. "Proiz-vo trub". Khar'kov, Metallurgizdat, no. 6, 1962, 161-166)

TEXT: To isolate carbides out of 1Kh18N9T steel cylindrical samples were cut out, heat treated and converted into chips. An 1g portion of chips was dissolved in 120 ml solution of HCl and H_2SO_4 of 2, 4, 6 and 8-normal concentration at a slow boiling. Electrolytic dissolving was done in an electrolyte of the following composition: 74 g KCl, 10g thiocarbamide and 19 ml HCl per 1 l water; it lasted 4 hours at a current density of 0.02 a/cm^2. The isolated Ti carbides were baked, fused with K pyrosulfate, the fusions were leached in H_2SO_4, the solutions were put in a 100 ml retort and water was added to the mark. Using the color reaction of Ti with H_2O_2, the Ti content in solutions was determined by means of ФЭК -M (FEK-M). It has been found that the Ti carbide

Card 1/2

S/137/62/000/005/150/150
A052/A101

AUTHORS: Mal'tsev, V. F., Dvoryadkina, Ye. V.

TITLE: Photocolorimetric method of determining Mo in nickel-base alloys

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 8, abstract 5K50 (V sb. "Proiz-vo trub", Khar'kov, Metallurgizdat, no. 6, 1962, 147-150)

TEXT: A 0.1 g portion is dissolved in 25 ml acid mixture. After dissolving the content of the retort is concentrated to the point of SO_3 vapor liberation, cooled, 50 ml hot water is added to it and the whole is heated until the precipitate dissolves. After that the content of the retort is brought over in a 200 ml retort and water is added to the mark. 5 ml is brought over in a 100 ml retort, 35 ml sulfurous-hydrocloric acid mixture, 45 ml water, 3 ml KSCN solution and 4 ml $SnCl_2$ are added, then water is added to the mark, and after 15 minutes the colorimetry is performed on ФЭК-М (FEK-M) unit in a vessel with a layer 20 mm thick, using a blue light filter.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 1/1

S/137/62/000/[illegible]/[illegible]/[illegible]
A006/A101

Investigation of phenomena occurring in...

and stresses of the II order. Changes in the stresses of II order were determined from the width of interference lines. X-raying of a rotating specimen was carried out on a УРС -5 И (URS-50I) ionization unit. In heating to 750°C the first recrystallization grains appear in the pipe structure. The temperature of 750°C may be considered as the onset of recrystallization of the specimen. Heating of deformed steel is accompanied by its softening manifested in a reduction of σ_b, σ_s, and hardness, with simultaneous increase of δ and removal of stresses of the II order. Softening of steel begins before the appearance of new grains, whilst the deformed structure is preserved (phenomenon of recovery). It is completed at 800 - 850°C. When heating to over 1,100°C, a decrease of the mechanical properties of the steel is observed, which is caused by intensive grain growth. The determination of bound Ti contained in the specimens, depending on the heating temperature, has shown that there are maximum amounts of bound Ti in the steel at temperatures corresponding to maximum hardness (950°C in the case of 3-hour holding and 1,050°C in the case of heating without holding). If the steel is heated over temperatures corresponding to hardness maxima, Ti carbides are dissolved.

T. Rumyantseva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/009/017/032
A006/A101

AUTHORS: Dolinskaya, L. A., Rizol', A. I., Mal'tsev, V. F., Nekrasova, S. Z., Andreyeva, Ye. M., Luk'yanenko, L. P.

TITLE: Investigation of phenomena occurring in cold-drawn stainless pipes during heating

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 9, 1962, 73, abstract 9I449 (In collection: "Proiz-vo trub", no. 6, Khar'kov, Metallurgizdat, 1962, 127 - 133)

TEXT: The authors studied the effect of holding time upon temperature limits of the recrystallization range in the treatment of colddrawn 1 Kh18N9T (1Kh18N9T) stainless steel pipes. Branches of these pipes were heated in a laboratory Silit furnace at 600 - 1,200°C, every 50°C, at a rate of 600 - 800 degree/min. Heating was performed with 3 hours 10 min holding, then the specimens were air-cooled. During the investigation of heat treated specimens, the authors determined microstructure, H_V, mechanical properties at 350°C, the content of bound Ti, the number of interference spots (pricks) on the lines of radiographs,

Card 1/2

MAL'TSEV, V.F.; LUK'YANENKO, L.P.; KUKUY, D.M.

Rapid photocolorimetric determination of aluminum in copper-zinc alloys. Zav.lab. 27 no.7:807-808 '61. (MIRA 14:7)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Aluminum--Analysis) (Copper-zinc alloys)

Photocolorimetric determination ....

light filter. In the case of a W content < 3 %, a tray with a 20 mm thick layer is used, and for larger contents - 10 mm.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/003/184/191
A154/A101

AUTHORS: Mal'tsev, V. F.; Dvoryadkina, Ye. V.

TITLE: Photocolorimetric determination of tungsten in high-alloy steels and alloys without separation of the accompanying elements

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 5, abstract 3 K 21 (Sb. "Proiz-vo trub". Vyp. 4. Khar'kov, Metallurgizdat, 1961, 161 - 162)

TEXT: 0.1 g of sample is dissolved in a 100 ml conical retort in 15 ml mixture of acids (H_3PO_4 + H_2SO_4), 5 ml of HCl and 5 ml of HNO_3, the contents of the retort are concentrated by evaporation until the SO_3 gases are liberated. cooled, 50 ml of hot water is added, and the product heated until dissolving of the precipitated H_2WO_4. The obtained transparent solution is then poured over into a 100-ml retort and brought up to the mark with water. From here 20 ml is aliquotted into a 50 ml retort, 20 ml HCl, 3 ml KSCN, 4 ml $SnCl_2$ and 2 ml $Tl(SO_4)_2$ are added, and the contents brought up to the mark with HCl. After 5 minutes the solution examined colorimetrically on aФЭК-М(FEK-M) with the use of a blue

Card 1/2

S/[illegible]/62/000/009/023/075
B150/B101

AUTHORS: [illegible]'tsev, V. F., Dych, V. .n.

TITLE: Photoelectric unit for colorimetry of micro- and ultramicro-quantitative colour substances

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 9, 1962, 167, abstract 9Ye19 (Sb. "Proizvo trub", no. 4, Khar'kov, Metallurgizdat, 1961, 157 - 160)

TEXT: A photoelectric colorimeter, with diaphragms for emitting a narrow beam of light, a disc with a light filter assembly, and a cuvette of small diameter has been designed on the same system as the Davydov instrument. The unit comprises the colorimeter proper, a mirror galvanometer and a measuring device. The cuvette windows are of a larger diameter than the cuvette itself in order to keep the small-dimensioned cuvette stable in its holder. The mirror galvanometer is characterized by high sensitivity so as to permit of working with small quantities of substances and consequently with narrow beams of light. [Abstracter's note: Complete translation.]

Card 1/1

nical flask, neutralized with 1 : 1 NH_4OH, acidified with 6 ml HCl (sp.gr. 1.055), treated with 2 ml aq. $CuSO_4$ (9.85 g salt + 7.5 ml conc. H_2SO_4 + water to 1 l) and with 20 ml of 7 % thiourea solution. One sample (a blank) is made up to 50 ml and the other mixed with 2 ml of 10 % aq. ammonium molybdate (dropwise) and diluted to 50 ml. Absorption coefficients are then measured, with a red filter on 3 cm columns of solutions. The overall determination requires 40 - 45 min. A calibration curve was prepared from standard samples and P determinations were carried out by the above and volumetric methods, in a number of steels, obtaining excellent agreement. The results are tabulated. There are 4 tables and 3 Soviet-bloc references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut
(All-Union Scientific Research Institute of Tubes)

S/593/60/000/000/001/007
D204/D301

AUTHORS: Maltsev, V.F., Candidate of Chemical Sciences, Kafarova, Yu.N., and Shinkareva, V.Ye.

TITLE: Photocolorimetric determination of P in high-alloy steels

SOURCE: Soveshchaniye po khimicheskomu kontrolyu proizvodstva v metallurgicheskoy i metalloobrabatyvayushchey promyshlennosti. Dnepropetrovsk, 1958. Khimicheskiy kontrol' proizvodstva v metallurgicheskoy i metalloobrabatyvayushchey promyshlennosti; [doklady soveshchaniya] [Dnepropetrovsk] 1960, 86 - 90

TEXT: The following procedure was developed owing to the lack of a convenient method of analysis for P in the presence of other alloying elements in steels. The steel sample (1 g) is dissolved in 20 ml of 1 : 1 conc. HCl and HNO_3, the solution is heated oxidized with 50 ml of 4 % $KMnO_4$, boiled, cleared with 10 - 12 ml HCl and diluted to 100 ml in a vol. flask. Two 10 ml portions are put in co-

Card 1/2

MAL'TSEV, V.F.; NOVAK, V.P.

Amperometric method for determining fluorine in pickling solutions.
Zav.lab. no.11:1296-1297 '59. (MIRA 13:4)

1.Ukrainskiy nauchno-issledovatel'skiy trubnyy insititut.
(Fluorine --Analysis) (Metals-- Etching)

Electrolytic method of...

of Ni a little later. A noticeable dissolution of steel starts at +400 mv. The dissolution intensity decreases with increasing potential, but above 900 mv it begins to rise. In $C_2H_2O_4$, the anodic behavior of the metals studied is less differentiated, and the curves for steel and chromium are in full agreement. To study the electrochemical dissolution of 1Kh18N9T steel, a melt of the following composition (in %) was prepared: C 0.07, Mn 0.93, Si 0.50, Cr 18.6, Ni 9.3, Ti 0.43, the rest Fe. The specimens were subjected to heat treatment at 1350°C with subsequent hardening in water. Anodic dissolution was conducted in a 3 % $(NH_4)_2S_2O_8$ solution acidified with H_2SO_4 at D_a 2 ma/cm^2 with a Pt cathode. After 1-2 min, the α-phase appeared on the ground surface. By measuring the grain width of the α-phase, 1 min and 4 hr after the beginning of electrolysis, it was found that only the α-phase was dissolved. [Abstracter's note: Complete translation.]

Card 2/2